



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

Joseph E. Kernan  
Governor

Lori F. Kaplan  
Commissioner

September 17, 2003

100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
(317) 232-8603  
(800) 451-6027  
[www.in.gov/idem](http://www.in.gov/idem)

TO: Interested Parties / Applicant

RE: Iron Dynamics, Inc. / 033-17732-00076

FROM: Paul Dubenetzky  
Chief, Permits Branch  
Office of Air Quality

## Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures  
FNPER-AM.dot 9/16/03



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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www.state.in.us/idem

September 17, 2003

Mr. Barry Smith  
Iron Dynamics, Inc.  
4500 County Road 59  
Butler, Indiana 46721

Re: 033-17732-00076  
First Amendment to SSM #033-15955-00076

Dear Mr. Smith:

Iron Dynamics, Inc. was issued a Significant Source Modification (SSM) on December 18, 2002. A letter requesting a change to the permitted 100,000 scfm baghouse was received on July 21, 2003. Additional information was received on August 21, 2003. Pursuant to the provisions of 2-7-11, the permit is hereby amended as follows:

1. The source was permitted to install one (1) 100,000 scfm baghouse to control the fugitive emissions from Rotary Hearth Furnace (RHF), which vents through Stack 77, in SSM#033-15955-00076, issued on December 18, 2002. In a letter received on July 21, 2003, the source requested to install two (2) baghouses with the same total air flow rate (one (1) 60,000 scfm baghouse and one (1) 40,000 scfm baghouse), instead of one (1) 100,000 scfm baghouse, to control the fugitive emissions from RHF. The proposed two (2) baghouses will vent through one single stack (Stack 77) and have the same design outlet grain loading as the permitted 100,000 scfm baghouse.

Pursuant to SSM #033-15955-00076, issued on December 18, 2002, the 100,000 scfm baghouse has the following BACT limits:

- (a) PM/PM10 emissions shall not exceed 4.46 lbs/hr.
- (b) The flow rate from stack 77 shall not exceed 100,000 scfm.
- (c) The outlet grain loading of the 100,000 scfm baghouse shall not exceed 0.0052 gr/scf.

Since the total flow rate from the proposed two (2) baghouses is equal to the flow rate of the permitted 100,000 scfm baghouse, the outlet grain loading limit will remain the same, and the proposed two (2) baghouse will vent through the same stack (Stack 77), the source will comply the existing BACT limits after this modification. In addition, since the stack parameters and the total air flow rate for Stack 77 remain the unchanged, it is not necessary to perform another air quality analysis for PSD review purposes. Therefore, Conditions A.2 and D.1 have been revised as follows:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]  
[326 IAC 2-7-5(15)]

This modification to a stationary source is approved to make the following changes to the existing emission units and pollution control devices:

- (a) Use of Electric Arc Furnace (EAF) baghouse dust as a supplemental feed material for the RHF.
- (b) Addition of ~~a 100,000~~ **one (1) 60,000 dscfm air flow baghouse and one (1) 40,000 dscfm air flow baghouse** to control fugitive emissions from the Rotary Hearth Furnace (RHF), **both** exhausting to the stack identified as 77.



- (c) Increasing the air flow rate by 100,000 dscfm for the Submerged Arc Furnace (SAF) existing baghouse.

## SECTION D.1 FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

- (a) Use of Electric Arc Furnace (EAF) baghouse dust as a supplemental feed material for the RHF.
- (b) Addition of ~~a 100,000~~ **one (1) 60,000** dscfm air flow baghouse **and one (1) 40,000 dscfm air flow baghouse** to control fugitive emissions from the Rotary Hearth Furnace (RHF), **both** exhausting to the stack identified as 77.
- (c) Increasing the air flow rate by 100,000 dscfm for the Submerged Arc Furnace (SAF) existing baghouse.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### D.1.1 Particulate Matter (PM) - Best Available Control Technology [326 IAC 2-2-3]

- (b) Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements), the PM/PM10 (where PM 10 includes both filterable and condensable components) emissions from the rotary hearth furnace associated discharge chute baghouses shall not exceed ~~an a~~ **a total** air flow rate design of 100,000 dscfm and 0.0052 grains per dscf through stack 77. The total per hour emissions shall not exceed 4.46 pounds.

### D.1.2 Opacity Limitation - Best Available Control Technology [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements) and CP-033-8091-00043, issued on June 25, 1997, the visible emissions discharged into the atmosphere from the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute baghouses (Stack 77) shall each be limited to three percent (3%) opacity in accordance condition D.1.18. determined by a six (6) minute average (24 reading taken in accordance with EPA Method 9, Appendix A).

### D.1.7 Lead Emissions - Best Available Control Technology [326 IAC 2-2-3]

- (b) The lead emissions from the rotary hearth furnace associated discharge chute baghouses (Stack 77) shall not exceed 0.019 pounds per hour.

### D.1.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for the control devices for the rotary hearth furnace process baghouse (Stack 40), associated discharge chute **baghouses** (Stack 77), and the submerged arc furnace (Stack 58).

### D.1.11 Particulate Matter (PM/PM10) [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements), the baghouse for PM/PM10 control shall be in operation and control emissions from the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute **baghouses** (Stack 77) at all times the rotary hearth furnace is in operation to comply with the limitations in conditions D.1.1, D.1.7 and D.1.8.

D.1.16 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

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- (b) During the timeframe mentioned in the item (a) of this condition, the Permittee shall perform PM/PM10 testing for the RHF associated discharge chute baghouses (Stack 77) in order to demonstrate compliance with condition D.1.1 (b), utilizing methods as approved by the Commissioner. The PM-10 includes both filterable and condensable components.

D.1.18 Opacity Monitoring on the Rotary Hearth Furnace

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The Permittee shall demonstrate compliance with condition D.1.2 by using any of the following methods:

- (a) Opacity readings by certified opacity observer:
  - (1) Opacity from the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute baghouses (Stack 77) stacks shall be performed at least once per shift during normal daylight operations. A certified opacity observer shall observe the opacity when the rotary hearth furnace is in operation.
  - .....
- (b) Install, calibrate, certify, operate, and maintain a continuous opacity monitoring system in accordance with 40 CFR 60, Appendix B, Performance Specification for measuring opacity from the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute baghouses (Stack 77) stacks in accordance with 326 IAC 3-5-2 through 326 IAC 3-5-7.

D.1.20 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bags controlling the rotary hearth furnace process baghouses, ~~and~~ discharge chute baghouses, and the submerged arc furnace. All defective bags shall be replaced.

D.1.22 Record Keeping Requirements

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- (b) To document compliance with Condition D.1.18 (a), (if applicable) the Permittee shall maintain records of opacity readings of the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute baghouses (Stack 77) stacks exhaust once per shift for a period of three (3) years. These records shall be made available to the IDEM, OAQ staff upon request for their review.
2. The responsible official for this source has been changed to Mr. David Bednarz, DRI Manager. In order to avoid future amendment due to the changes in responsible official, IDEM, OAQ will only list the title of the responsible official in the permit. In addition, the area code for Butler, Indiana has been changed to 260. Therefore, Condition A.1 has been revised as follows:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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The Permittee owns and operates a Direct Reduced Iron facility.

Responsible Official:	<del>Mark Millett</del> <b>DRI Manager</b>
Source Address:	4500 County Road 59, Butler, Indiana 46721
Mailing Address:	4500 County Road 59, Butler, Indiana 46721
General Source Phone Number:	<del>219</del> <b>260</b> -868-8000
SIC Code:	3312
County Location:	DeKalb
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules

All other conditions of the permit shall remain unchanged and in effect. Please find attached a copy of the revised permit.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky  
Paul Dubenetzky, Chief  
Permits Branch  
Office of Air Quality

ERG/YC

cc: File - DeKalb County  
DeKalb County Health Department  
Air Compliance - Doyle Houser  
Northern Regional Office  
Air Compliance Section Inspector - Doyle Houser  
Permit Tracking - Sara Cloe  
Technical Support and Modeling - Michele Boner  
Compliance Branch - Karen Ampil



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## **PART 70 SIGNIFICANT SOURCE MODIFICATION AND MAJOR MODIFICATION UNDER PREVENTION OF SIGNIFICANT DETERIORATION**

### **OFFICE OF AIR QUALITY**

**Iron Dynamics, Inc.  
4500 County Road 59,  
Butler, Indiana 46721**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This permit is issued under the provisions of 326 IAC 2 and 40 CFR Part 52.21 (Prevention of Significant Deterioration) and 40 CFR 124 (Procedure for Decision Making), with conditions listed on the attached pages.

This approval is also issued in accordance with 40 CFR 70 Appendix A and Contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et seq. (Clean Air Act as amended by the 1990 Clean Air Act amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Significant Source Modification No.: 033-15955-00076	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: December 18, 2002
First Amendment No.: 033-17732-00076      Pages Affected: 4, 14-18, 20	
Issued by: Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: September 17, 2003

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Emergency Occurrence Report  
Certification  
Quarterly Deviation and Compliance Monitoring Report  
Affidavit of Construction

## SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

---

The Permittee owns and operates a Direct Reduced Iron facility.

Responsible Official:	DRI Manager
Source Address:	4500 County Road 59, Butler, Indiana 46721
Mailing Address:	4500 County Road 59, Butler, Indiana 46721
General Source Phone Number:	260-868-8000
SIC Code:	3312
County Location:	DeKalb
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules

### A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

---

This modification to a stationary source is approved to make the following changes to the existing emission units and pollution control devices:

- (a) Use of Electric Arc Furnace (EAF) baghouse dust as a supplemental feed material for the RHF.
- (b) Addition of one (1) 60,000 dscfm air flow baghouse and one (1) 40,000 dscfm air flow baghouse to control fugitive emissions from the Rotary Hearth Furnace (RHF), both exhausting to the stack identified as 77.
- (c) Increasing the air flow rate by 100,000 dscfm for the Submerged Arc Furnace (SAF) existing baghouse.

### A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

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This modification to a stationary source does not involve any insignificant activities, as defined in 326 IAC 2-7-1(21).

### A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

## **SECTION B                      GENERAL CONSTRUCTION CONDITIONS**

### **B.1      Definitions [326 IAC 2-7-1]**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

### **B.2      Effective Date of the Permit [IC13-15-5-3]**

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Pursuant to 40 CFR 124.15, 40 CFR 124.19, and 40 CFR 124.20, the effective date of this permit will be thirty (30) days after the service of notice of the decision, as comments were received during the public comment period for this permit. Three (3) days shall be added to the thirty (30) day period if service of notice is by mail.

### **B.3      Permit Expiration Date [326 IAC 2-2-8(a)(1)] [40 CFR 52.21(r)(2)]**

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Pursuant to 40 CFR 52.21(r)(2) and 326 IAC 2-2-8(a)(1) (PSD Requirements: Source Obligation) this permit to construct shall expire if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is discontinued for a continuous period of eighteen (18) months or more, or if construction is not completed within reasonable time. IDEM may extend the eighteen (18) month period upon satisfactory showing that an extension is justified.

### **B.4      Significant Source Modification [326 IAC 2-7-10.5(h)]**

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This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when the following requirements are met:

- (a)      The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application or the permit. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b)      If actual construction of the emissions units differs from the construction proposed in the application or the permit in a manner that is regulated under the provisions of 326 IAC 2-2, the source may not begin operation until the source modification has been revised pursuant to the provisions of that rule and the provisions of 326 IAC 2-2 and an Operation Permit Validation Letter is issued.
- (c)      If actual construction of the emissions units differs from the construction proposed in the application or the permit in a manner that is not regulated under the provisions of 326 IAC 2-2, the source may not begin operation until the source modification has been revised pursuant to the provisions of 326 IAC 2-7-10.5 and the provisions of 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (d)      The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (e)      In the event that the Part 70 application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:
  - (1)      If the Part 70 draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Part 70 draft.

- (2) If the Part 70 permit has gone through final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go through a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Part 70 permit at the time of issuance.
- (3) If the Part 70 permit has gone through public notice, but has not gone through final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Part 70 permit, and the Title V permit will issued after EPA review.

## SECTION C GENERAL OPERATION CONDITIONS

### C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

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- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, or its equivalent, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

### C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1), (3) and (13)] [326 IAC 2-7-6 (6)] [326 IAC 1-6-3]

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- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, including the following information on each control device:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The PMP does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation.
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

### C.3 Inspection and Entry [326 IAC 2-7-6]

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Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this approval;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this approval or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this approval or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this approval or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this approval or applicable requirements.

**C.4 Opacity [326 IAC 5-1]**

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**C.5 Fugitive Dust Emissions [326 IAC 6-4]**

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The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

**C.6 Operation of Equipment [326 IAC 2-7-6(6)]**

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Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

**Testing Requirements [326 IAC 2-7-6(1)]**

**C.7 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]**

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- (a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 18 months after issuance of the validation letter, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management

Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation no later than five (5) days prior to the end of the initial forty-five (45) day period.

#### **Compliance Requirements [326 IAC 2-1.1-11]**

##### **C.8 Compliance Requirements [326 IAC 2-1.1-11]**

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U.S. EPA.

#### **Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]**

##### **C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

##### **C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]**

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Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

##### **C.11 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]**

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Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ( $\pm 2\%$ ) of full scale reading.

#### **Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]**

##### **C.12 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]**

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- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared before the affidavit of construction is submitted to the IDEM, supplemented from time to time by the Permittee, maintained on site, and comprised of:
  - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit;

and an expected timeframe for taking reasonable response steps.

- (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
  - (1) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
  - (2) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
  - (3) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
  - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
  - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.
  - (3) An automatic measurement was taken when the process was not operating.
  - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

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**C.13 Emergency Provisions [326 IAC 2-7-16]**

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

- (b) Pursuant to 326 IAC 2-7-16 (b) an emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition

is in addition to any emergency or upset provision contained in any applicable requirement.

- (e) IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

**C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, not later than thirty (30) days after receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed not later than one hundred twenty (120) days after receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

**C.15 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]**

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented when the new or modified equipment begins normal operation.

**C.16 General Reporting Requirements [326 IAC 2-7-5(3)(C)]**

- (a) The source shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the

certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted no later than thirty (30) days after the end of the reporting period. All reports unless otherwise specified do require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).
- (e) The first report shall cover the period commencing on the date of submission of affidavit of construction and ending on the last day of the reporting period. Reporting periods are based on calendar years.

## SECTION D.1

## FACILITY OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]

- (a) Use of Electric Arc Furnace (EAF) baghouse dust as a supplemental feed material for the RHF.
- (b) Addition of one (1) 60,000 dscfm air flow baghouse and one (1) 40,000 dscfm air flow baghouse to control fugitive emissions from the Rotary Hearth Furnace (RHF), both exhausting to the stack identified as 77.
- (c) Increasing the air flow rate by 100,000 dscfm for the Submerged Arc Furnace (SAF) existing baghouse.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards [326 IAC 2-7-5(1)]

#### D.1.1 Particulate Matter (PM) - Best Available Control Technology [326 IAC 2-2-3]

- (a) Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements) and CP-033-8091-00043, issued on June 25, 1997, the PM/PM10 (where PM 10 includes both filterable and condensable components) emissions from the rotary hearth furnace process baghouse shall not exceed an air flow rate design of 310,000 dscfm (353,000 acfm) and 0.0052 grains per dscf through stack 40. The total per hour emissions shall not exceed 13.4 pounds.
- (b) Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements), the PM/PM10 (where PM 10 includes both filterable and condensable components) emissions from the rotary hearth furnace associated discharge chute baghouses shall not exceed a total air flow rate design of 100,000 dscfm and 0.0052 grains per dscf through stack 77. The total per hour emissions shall not exceed 4.46 pounds.

#### D.1.2 Opacity Limitation - Best Available Control Technology [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements) and CP-033-8091-00043, issued on June 25, 1997, the visible emissions discharged into the atmosphere from the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute baghouses (Stack 77) shall each be limited to three percent (3%) opacity in accordance condition D.1.18. determined by a six (6) minute average (24 reading taken in accordance with EPA Method 9, Appendix A).

#### D.1.3 Nitrogen Oxides (NOx) - Best Available Control Technology [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements) and CP-033-8091-00043, issued on June 25, 1997, the nitrogen oxide(s) emissions from the rotary hearth furnace process baghouse (Stack 40) shall be controlled by the use of low-NOx natural gas-fired burners and a selective non-catalytic reduction unit. Except during periods of startup or shutdown, the total emissions shall not exceed 1.25 pounds per ton of material charged into the furnace and 120 pounds per hour.

The SNCR system shall be operated in a manner recommended by the manufacturer and good work practices to minimize the NOx emissions and ammonia slip.

The condition D.1.3 in this permit supersedes the Operating Condition 24 in the CP 033-8091-00043, and condition D.1.3 in the MSM 033-13911-00076.

**D.1.4 Carbon Monoxide (CO) - Best Available Control Technology [326 IAC 2-2-3]**

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Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements) and CP-033-8091-00043, issued on June 25, 1997, except during periods of startup or shutdown, the carbon monoxide emissions from the rotary hearth furnace process baghouse (Stack 40) shall be controlled by afterburner and operated at a temperature exceeding two thousand six hundred (2,600)°F and emissions shall not exceed 100 ppm and 114,519 ug/m3. The total emissions per hour shall not exceed 146.8 pounds.

The condition D.1.4 in this permit supersedes the Operating Condition 25 in the CP 033-8091-00043, and condition D.1.4 in the MSM 033-13911-00076.

**D.1.5 Volatile Organic Compounds (VOC)**

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Pursuant to CP-033-8091-00043, issued on June 25, 1997, except during periods of startup or shutdown, the volatile organic compound emissions from the rotary hearth furnace process baghouse (Stack 40) shall be controlled by an afterburner and operated at a temperature exceeding two thousand six hundred (2,600) °F and emissions shall not exceed 0.06 pounds per ton of material charged into the furnace. The total emissions shall not exceed 6.23 pounds per hour.

The condition D.1.5 in this permit supersedes the Operating Condition 26 in the CP 033-8091-00043, and condition D.1.5 in the MSM 033-13911-00076.

**D.1.6 Sulfur Dioxide (SO2) - Best Available Control Technology [326 IAC 2-2-3]**

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Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements) and CP-033-8091-00043, issued on June 25, 1997, the sulfur dioxide emissions from the rotary hearth furnace process baghouse (Stack 40) shall be controlled by lime injection, wet scrubber and/or use of EAF dust as supplemental feedstock. The SO2 emissions shall be limited as follows:

- (a) When using lime injection or wet scrubber as control, SO2 emissions shall not exceed 0.75 pounds per ton of material charged into the furnace. The SO2 emissions shall not exceed 78 pounds per hour.
- (b) When using at least 2 tons per hour of EAF dust as supplemental feedstock as control, SO2 emissions shall not exceed 0.4 pounds per ton of material charged into the furnace. The SO2 emissions shall not exceed 39.0 pounds per hour. If the stack test required under Condition D.1.16 shows that this limitation is not achievable in practice, the Permittee can request the Department to re-evaluate the D.1.6 (b) to adjust this limitation to reflect the control efficiency observed in the test. The Department may, at its discretion, use the authority under IC 13-15-7-2 to re-open and revise the limit to more closely reflect the actual stack test results. The Department will provide an opportunity for public notice and comment prior to finalizing any permit revision. IC 13-15-7-3 (Revocation or Modification of a Permit: Appeal to Board) shall apply to this permit modification.

The condition D.1.6 in this permit supersedes the Operating Condition 27 in the CP 033-8091-00043, and condition D.1.6 in the MSM 033-13911-00076.

**D.1.7 Lead Emissions - Best Available Control Technology [326 IAC 2-2-3]**

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- (a) Pursuant to CP-033-8091-00043, issued on June 25, 1997, lead emissions from the rotary hearth furnace process baghouse (Stack 40) shall not exceed 0.00058 pounds per ton of material charged into the furnace and 0.0557 pounds per hour. The condition D.1.7 in this permit supersedes the Operating Condition 24 in the CP 033-8091-00043, and condition D.1.7 in the MSM 033-13911-00076.
- (b) The lead emissions from the rotary hearth furnace associated discharge chute

baghouses (Stack 77) shall not exceed 0.019 pounds per hour.

**D.1.8 Startup and Shutdown Emissions - Best Available Control Technology [326 IAC 2-2-3]**

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- (a) Startup is defined as the duration from the first firing of burners in the RHF to the time when the RHF exhaust gas temperature is within the optimum ranges of the operation of control devices for NO<sub>x</sub>, CO and VOC emissions.
- (b) Shutdown is defined as the duration from first curtailment of fuel input to the RHF burners with the intent of full shutdown to the final complete stop of fuel input and complete cessation of combustion in the RHF.
- (c) The RHF shall be operated in a manner consistent with good air pollution control and work practices to minimize emissions during startup, and shutdown by operating in accordance with written procedures developed and maintained by the Permittee, which shall include at a minimum the following measures:
  - (1) Review of operating parameters of the unit during startup, or shutdown as necessary to make adjustments to reduce or eliminate excess emissions;
  - (2) Operate emission control equipment as soon as the RHF exhaust gas temperature reaches the lower value of the optimum temperature range for the control equipment. This operation shall continue until the time the RHF shutdown sequence is initiated with the intention of shutdown of the unit; and
  - (3) Implementation of inspection and repair procedures for the RHF and the emissions control equipment prior to attempting startup to ensure proper operation.

**D.1.9 Particulate Matter (PM) - Best Available Control Technology [326 IAC 2-2-3]**

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Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements), the PM/PM<sub>10</sub> emissions from the SAF stack (No. 58) shall not exceed 0.0032 grains per dry standard cubic foot. At a maximum air flow rate of 300,000 standard cubic feet per minute, this limit is equivalent to 8.23 pounds of PM/PM<sub>10</sub> per hour. The operation condition 22 for PM/PM<sub>10</sub> emissions from the SAF in the CP 033-9187-00043 is superceded by condition D.1.9 in this permit.

**D.1.10 Preventive Maintenance Plan [326 IAC 2-7-5(13)]**

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A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for the control devices for the rotary hearth furnace process baghouse (Stack 40), associated discharge chute baghouses (Stack 77), and the submerged arc furnace (Stack 58).

**Compliance Determination Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

**D.1.11 Particulate Matter (PM/PM<sub>10</sub>) [326 IAC 2-2-3]**

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Pursuant to 326 IAC 2-2-3 (Control Technology Review: Requirements), the baghouse for PM/PM<sub>10</sub> control shall be in operation and control emissions from the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute baghouses (Stack 77) at all times the rotary hearth furnace is in operation to comply with the limitations in conditions D.1.1, D.1.7 and D.1.8.

**D.1.12 Nitrogen Oxides (NO<sub>x</sub>) [326 IAC 2-2-3]**

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Pursuant to CP-033-8091-00043, issued on June 25, 1997, except during periods of startup or shutdown, the selective non-catalytic reduction unit for NO<sub>x</sub> control shall be in operation and control emissions from the rotary hearth furnace process baghouse (Stack 40) at all times the rotary hearth furnace is in operation to comply with the limitations in condition D.1.3.

D.1.13 Carbon Monoxide (CO) and Volatile Organic Compounds (VOC) [326 IAC 2-2-3]

Pursuant to CP-033-8091-00043, issued on June 25, 1997, except during periods of startup or shutdown, the afterburner for control of carbon monoxide and volatile organic compounds shall be in operation and control emissions from the rotary hearth furnace process baghouse (Stack 40) at all times the rotary hearth furnace is in operation to comply with the limitations in conditions D.1.4 and D.1.5.

D.1.14 Sulfur Dioxide (SO<sub>2</sub>) [326 IAC 2-2-3]

Pursuant to CP-033-8091-00043, issued on June 25, 1997, the lime injection or wet scrubber unit for sulfur dioxide control shall be in operation and/or use of EAF dust as supplemental feedstock in the RHF to control emissions from the rotary hearth furnace process baghouse (Stack 40) at all times the rotary hearth furnace is in operation to comply with the limitations in condition D.1.6.

D.1.15 Particulate Matter (PM/PM<sub>10</sub>) [326 IAC 2-2-3]

Pursuant to CP-033-9187-00043, issued on March 24, 1998, the baghouse for PM/PM<sub>10</sub> control shall be in operation and control emissions from the submerged arc furnace at all times the submerged arc furnace is in operation to comply with the limitations in condition D.1.9.

D.1.16 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

- (a) Within 60 days of achieving maximum production rate, but no later than 18 months after issuance of the operation permit validation letter, for the rotary hearth furnace process baghouse (Stack 40) and the submerged arc furnace (Stack 58), in order to demonstrate compliance with conditions D.1.1 (a) through D.1.4, D.1.6 and D.1.9 the Permittee shall perform PM, PM<sub>10</sub>, NO<sub>x</sub>, CO and SO<sub>2</sub> testing on the RHF process baghouse (Stack 40) and PM/PM<sub>10</sub> testing on the SAF (Stack 58) utilizing methods as approved by the Commissioner. The PM-10 includes both filterable and condensable components.
- (b) During the timeframe mentioned in the item (a) of this condition, the Permittee shall perform PM/PM<sub>10</sub> testing for the RHF associated discharge chute baghouses (Stack 77) in order to demonstrate compliance with condition D.1.1 (b), utilizing methods as approved by the Commissioner. The PM-10 includes both filterable and condensable components.
- (c) During the timeframe mentioned in the item (a) of this condition, the Permittee shall analyze the EAF baghouse dust for the hazardous components. The Permittee shall calculate the hourly HAP emissions assuming 100% vaporization of the hazardous components identified previously for the rotary hearth furnace process baghouse (Stack 40), using the highest throughput rate in tons per hour of EAF baghouse dust achieved during this period. This mass balance computation shall be converted to annual emissions, assuming 8760 hours of operation in a year, and used to establish that the single HAP emissions are less than 10 tons per year, and the combination of HAPs emissions are less than 25 tons per year pursuant to 326 IAC 2-4.1-1. In the event that the HAP emission exceed the threshold stated earlier, the Permittee shall inform the IDEM, OAQ about the same, and curtail the operation of the RHF in a manner, not to exceed the thresholds specified in this condition.

All testing (except testing of EAF baghouse dust which shall be tested in accordance with SW-846 or other approved methods) shall be conducted in accordance with Section C- Performance Testing. This condition supersedes Operation Condition 7 in the Permit 033-8091-00043 with respect to the rotary hearth furnace part only.

## **Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]**

### **D.1.17 Continuous Emission Rate Monitoring Requirement [326 IAC 3-5]**

---

- (a) Pursuant to 326 IAC 3-5-1(d), the Permittee shall install, calibrate, certify, operate, and maintain a continuous monitoring system for measuring NO<sub>x</sub>, CO, and SO<sub>2</sub> emissions rates in pounds per hour from the rotary hearth furnace process baghouse stack (identified as stack 40) in accordance with 326 IAC 3-5-2 through 326 IAC 3-5-7.
- (b) The Permittee shall submit to IDEM, OAQ, prior to start of operation, a complete written continuous monitoring standard operating procedure (SOP), in accordance with the requirements of 326 IAC 3-5-4.
- (c) The Permittee shall record the output of the system and shall perform the required record keeping, pursuant to 326 IAC 3-5-6, and reporting, pursuant to 326 IAC 3-5-7.

Compliance with this condition shall determine continuous compliance with the NO<sub>x</sub>, CO, and SO<sub>2</sub> emission limits under operation conditions D.1.3, D.1.4, and D.1.6, respectively.

### **D.1.18 Opacity Monitoring on the Rotary Hearth Furnace**

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The Permittee shall demonstrate compliance with condition D.1.2 by using any of the following methods:

- (a) Opacity readings by certified opacity observer:
  - (1) Opacity from the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute baghouses (Stack 77) stacks shall be performed at least once per shift during normal daylight operations. A certified opacity observer shall observe the opacity when the rotary hearth furnace is in operation.
  - (2) These observations shall be taken in accordance with 40 CFR 60 Appendix A, Method 9 for at least two six (6) minute averages.
  - (3) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
  - (4) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an excess emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
  - (5) Conditions (a) through (c) above are not applicable should a continuous opacity monitor be installed which meet 40 CFR 60, Appendix B, Performance Specification 1, or a bag leak detector is installed as provided in this condition.
- (b) Install, calibrate, certify, operate, and maintain a continuous opacity monitoring system in accordance with 40 CFR 60, Appendix B, Performance Specification for measuring opacity from the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute baghouses (Stack 77) stacks in accordance with 326 IAC 3-5-2 through 326 IAC 3-5-7.

The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an excess emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

- (c) Installation and operation of a bag leak detection system. If bag leak detection system is installed, then condition D.1.19 and D.1.20 shall not be applicable. If the bag leak detection system is inoperable, the Permittee shall substitute Conditions D.1.18 (1), D.1.19 and D.1.22 (b) and (c) to show compliance, until the bag leak detection system is operable.

The baghouse leak detection system shall meet the following criteria:

- (1) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 0.0052 grains per dry standard cubic foot or less.
- (2) The bag leak detection system sensor must provide output of relative particulate matter loading.
- (3) The bag leak detection system must be equipped with an alarm system that will alarm when an increase in relative particulate loading is detected over a preset level established or verified during a stack test.
- (4) The bag leak detection system shall be installed and operated in a manner consistent with available written guidance from the U.S. Environmental Protection Agency or, in the absence of such written guidance, the manufacturer's written specifications and recommendations for installation, operation, and adjustment of the system.
- (5) The initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the sensitivity (range) and the averaging period of the device, and establishing the alarm set points and the alarm delay time.
- (6) In no event shall the sensitivity be increased by more than 100 percent or decreased by more than 50 percent over a 365 day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.
- (7) The bag leak detection system sensors must be inspected monthly and build-up must be removed from probe and insulator.
- (8) The Permittee shall perform monthly QA checks including response tests and electronics drift checks and opacity readings to confirm the operation of the baghouse is in order.
- (9) The bag detector must be installed downstream of the baghouse.
- (10) In the event of a bag leak detection system alarm is triggered, the Permittee shall follow steps in condition D.1.21 of this permit.
- (11) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an excess emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

#### D.1.19 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the rotary hearth furnace and submerged arc furnace, at least once per shift when these

processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 4.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ and shall be calibrated or replaced at least once every six (6) months.

#### D.1.20 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bags controlling the rotary hearth furnace process baghouses, discharge chute baghouses, and the submerged arc furnace. All defective bags shall be replaced.

#### D.1.21 Broken or Failed Bag Detection

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- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section C- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

### **Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]**

#### D.1.22 Record Keeping Requirements

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- (a) To document compliance with Condition D.1.17, and D.1.18(b) (if applicable) the Permittee shall maintain records as required under 326 IAC 3-5-6 at the source in a manner such that they may be inspected by IDEM, OAQ or U.S. EPA, if requested.
- (b) To document compliance with Condition D.1.18 (a), (if applicable) the Permittee shall maintain records of opacity readings of the rotary hearth furnace process baghouse (Stack 40) and associated discharge chute baghouses (Stack 77) stacks exhaust once per shift for a period of three (3) years. These records shall be made available to the IDEM, OAQ staff upon request for their review.
- (c) To document compliance with Condition D.1.19 (if applicable), the Permittee shall maintain the per shift records of the differential static pressure during normal operation.
- (d) To document compliance with Condition D.1.20 (if applicable), the Permittee shall maintain records of the results of the inspections.
- (e) To document compliance with condition D.1.18 (c) (if applicable), the Permittee shall

maintain records of the dates and times of all bag leak detection system alarms, the cause of each alarm, and an explanation of all corrective actions taken and records of preventive maintenance required by D.1.18 (c)(7) and (8).

- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

#### D.1.23 Reporting Requirements

The Permittee shall submit on a quarterly basis records of excess opacity, NO<sub>x</sub>, SO<sub>2</sub> and CO emissions (defined in 326 IAC 3-5-7 and 40 CFR Part 60.7) from the continuous emissions monitoring system and the opacity readings taken. These reports shall be submitted no later than thirty (30) calendar days after the end of each calendar quarter and in accordance with Section C – General Reporting Requirements of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH  
100 North Senate Avenue  
P.O. Box 6015  
Indianapolis, Indiana 46206-6015  
Phone: 317-233-5674  
Fax: 317-233-5967**

**PART 70 OPERATING PERMIT  
EMERGENCY OCCURRENCE REPORT**

Source Name: Iron Dynamics, Inc.  
Source Address: 4500 County Road 59, Butler, Indiana 46721  
Mailing Address: 4500 County Road 59, Butler, Indiana 46721  
Permit No.: 033-15955-00076

This form consists of 2 pages

Page 1 of 2

- ☐ This is an emergency as defined in 326 IAC 2-7-1(12)  
The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and  
The Permittee must submit notice in writing or by facsimile within two (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

**Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency?    Y    N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO2, VOC, NOX, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: \_\_\_\_\_

Title / Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 SOURCE MODIFICATION  
CERTIFICATION**

Source Name: Iron Dynamics, Inc.  
Source Address: 4500 County Road 59, Butler, Indiana 46721  
Mailing Address: 4500 County Road 59, Butler, Indiana 46721  
Permit No.: 033-15955-00076

**This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.**

Please check what document is being certified:

- ☐ Test Result (specify)
- ☐ Report (specify)
- ☐ Notification (specify)
- ☐ Affidavit (specify)
- ☐ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE DATA SECTION**

**PART 70 OPERATING PERMIT  
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Iron Dynamics, Inc.  
Source Address: 4500 County Road 59, Butler, Indiana 46721  
Mailing Address: 4500 County Road 59, Butler, Indiana 46721  
Permit No.: 033-15955-00076

Months: \_\_\_\_\_ to \_\_\_\_\_ Year: \_\_\_\_\_

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	Duration of Deviation:
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	
<b>Permit Requirement</b> (specify permit condition #)	
<b>Date of Deviation:</b>	<b>Duration of Deviation:</b>
<b>Number of Deviations:</b>	
<b>Probable Cause of Deviation:</b>	
<b>Response Steps Taken:</b>	

Form Completed By: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

Mail to: Permit Administration & Development Section  
Office Of Air Quality  
100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015

Iron Dynamics, Inc.  
4500 County Road 59,  
Butler, Indiana 46721

**Affidavit of Construction**

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_.  
(Title) (Company Name)
3. By virtue of my position with Iron Dynamics, Inc., I have personal knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of Iron Dynamics, Inc.
4. I hereby certify that Iron Dynamics, Inc., 4500 County Road 59, Butler, Indiana 46721, has modified the equipment in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on May 02, 2002 and as permitted pursuant to **Source Modification No. 033-15955-00076** issued on \_\_\_\_\_.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of  
Indiana on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

My Commission expires:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (typed or printed)

**Indiana Department of Environmental Management  
Office of Air Quality**

**Technical Support Document (TSD) for a  
Part 70 Minor Source Modification**

**Source Background and Description**

Source Name:	Iron Dynamics, Inc.
Source Location:	4500 County Road 59, Butler, Indiana 46721
County:	DeKalb
SIC Code:	3312
Operation Permit No.:	T033-12614-00076
Operation Permit Issuance Date:	Pending
Minor Source Modification No.:	033-17732-00076
Permit Reviewer:	ERG/YC

The Office of Air Quality (OAQ) has reviewed a modification application from Iron Dynamics, Inc. relating to the construction of the following emission units and pollution control devices:

- (a) One (1) SAF dust recycling system, identified as #79 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (b) One (1) zinc silo, identified as #80 and constructed in 2003, with a maximum throughput rate of 3.0 tons of recycled zinc per hour, controlled by one (1) filter, and exhausting through stack S80.
- (c) One (1) ash silo, identified as #81 and constructed in 2003, with a maximum throughput rate of 3.0 tons of ash per hour, controlled by one (1) filter, and exhausting into the building.
- (d) One (1) EAF dust unloading process, identified as #82 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (e) One (1) vacuum system, identified as #83 and constructed in 2003, with a maximum throughput rate of 3.0 tons of dust per hour, controlled by one (1) filter, and exhausting into the building.
- (f) One (1) zinc silo unloading process, identified as #84 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.
- (g) One (1) ash silo unloading process, identified as #85 and constructed in 2003, with a maximum throughput rate of 3.0 tons of zinc per hour, controlled by one (1) filter, and exhausting into the building.

## History

On July 21, 2003, Iron Dynamics submitted an application to IDEM, OAQ requesting the addition of new silos and several material handling processes to their existing pig iron production line. Iron Dynamics is an existing gray iron foundry direct reduced iron facility and is a PSD major source. The source submitted their Part 70 permit application (T033-12614-00076) on January 11, 2000. This Part 70 permit is currently being drafted and has not yet been issued.

The proposed units will be used to transfer and recycle the dust collected from baghouses, which are used to control the emissions from furnaces RHF and SAF. The recycled dust will substitute a small portion of the raw material fed into this process line. Therefore, this modification will not debottleneck or increase utilization of the exiting furnaces RHF and SAF.

## Enforcement Issue

There are no enforcement actions pending.

## Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S80	Zinc Silo	86	2.2	900	90

## Recommendation

The staff recommends to the Commissioner that the Part 70 Minor Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on July 21, 2003. Additional information was received on August 15, 2003.

## Emission Calculations

See Appendix A of this document for detailed emissions calculations (page 1).

## Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	253
PM-10	253
SO <sub>2</sub>	---
VOC	---
CO	---
NO <sub>x</sub>	---

### Justification for Modification

This modification is being performed through a Part 70 Minor Source Modification pursuant to 326 IAC 2-7-10.5(d)(5) as the potential to emit PM and PM10 is each limited to less than 25 tons per year by using filters with a 99% control efficiency and no visible emissions.

### County Attainment Status

The source is located in DeKalb County.

Pollutant	Status
PM-10	Attainment
SO <sub>2</sub>	Attainment
NO <sub>2</sub>	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. DeKalb County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) DeKalb County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Fugitive Emissions  
Since this type of operation is in one of the 28 listed source categories under 326 IAC 2-2 the fugitive PM emissions are counted toward determination of PSD applicability.

### Source Status

Existing Source PSD Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Greater than 100
PM-10	Greater than 100
SO <sub>2</sub>	Greater than 100
VOC	Less than 100
CO	Greater than 100
NO <sub>x</sub>	Greater than 100

- (a) This existing source is a major stationary source because at least one of the attainment regulated pollutants is emitted at a rate of 100 tons or more per year, and it is in one of the 28 listed source categories.
- (b) These emissions were based on the Addendum to Technical Support Document (ATSP) for SSM #033-15955-00076, issued on December 18, 2002.

### Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs
Units #79 through #85	Less than 2.54	Less than 2.54	-	-	-	-	-
Total PTE of this Modification	Less than 2.54	Less than 2.54	-	-	--	--	-
PSD Significant Modification Thresholds	25	15	40	40	100	40	NA

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this modification.
- (c) This modification does not involve a pollutant-specific emissions unit:
  - (1) with the potential to emit before controls equal to or greater than one hundred (100) tons per year, and
  - (2) that is subject to an emission limit and has a control device that is necessary to meet that limit.

Therefore, the units in this modification are not subject to 40 CFR Part 64 - Compliance Assurance Monitoring (CAM).

### State Rule Applicability - Silos and Dust Handling Processes (#79 through #85)

#### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source was constructed in 1987 and modified in 1997 and 2002. This source is in one 1 of 28 source categories defined in 326 IAC 2-2-1(p)(1) and is an existing PSD major source. The potential to emit of this modification is greater than 25 tons/yr for PM and greater than 15 tons/yr for PM10. In order to be a PSD minor modification project, the PM and PM10 emissions from the proposed units shall not exceed the emission limits listed in the table below:

Unit ID	PM Emission Limit (lbs/hr)	PM10 Emission Limit (lbs/hr)
#79	0.15	0.15
#80	0.08	0.08

#81	0.08	0.08
#82	0.21	0.21
#83	0.02	0.02
#84	0.02	0.02
#85	0.02	0.02

The emission limits in the table above are the potential to emit PM/PM10 after control from units #79 through #85. This is equivalent to a total of 2.54 tons of PM/PM10 emissions from the proposed units. The use of filters ensures compliance with these limits. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

#### 326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

#### 326 IAC 2-7-10.5(d) (Part 70 Minor Source Modification)

Pursuant to 326 IAC 2-7-10.5(d)(5)(C) (Part 70 Minor Source Modification), the filters, which are used to limit the PM and PM10 emissions from this project to less than 25 tons/yr, shall comply with the following limits when units #79 through #85 are in operation:

- (a) At least 99% control efficiency; and
- (b) No visible emissions.

#### 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

particulate emissions from each of the units #79 through #85 shall not exceed 8.56 pounds per hour when operating at a process weight rate of 3.0 tons per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

According to the emission calculations (see Appendix A), the potential to emit PM after filter control from each of units #79 through #85 is less than the emission limit above. Therefore, units #79 through #85 are in compliance with 326 IAC 6-3-2. The use of filters ensures compliance with this limit.

### Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill

the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. The proposed zinc silo (#80), which exhausts to the atmosphere, has applicable compliance monitoring conditions as specified below:
  - (a) Visible emissions notations of the stack exhausts from stack S80 shall be performed once per shift during normal daylight operations when venting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
  - (b) An inspection shall be performed each calendar quarter of all filters controlling the zinc silo (#80). Inspections are optional when venting indoors. Inspections required by this condition shall not be performed in consecutive months. All defective filters shall be replaced.

[Note: The filter is equipped at the bin vent of the zinc silo and there is no corresponding pressure drop reading for this type of filter.]

These monitoring conditions are necessary because the filter associated with zinc silo (#80) must operate properly to ensure compliance with 326 IAC 2-7-10.5 (d) (Part 70 Minor Source Modification), 326 IAC 2-2 (PSD), and 326 IAC 6-3-2 (Manufacturing Processes).

2. The proposed ash silo (#81) and other dust handling processes (#79, #82 through #85), which exhaust into the building, have applicable compliance monitoring conditions as specified below:

An inspection shall be performed each calendar quarter of all filters controlling the units #79 and #81 through #85. A filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting indoors. Inspections required by this condition shall not be performed in consecutive months. All defective filters shall be replaced.

[Note: There is no corresponding pressure drop reading for this type of filter.]

These monitoring conditions are necessary because the filter associated with the units #79 and #81 through #85 must operate properly to ensure compliance with 326 IAC 2-7-10.5 (d) (Part 70 Minor Source Modification), 326 IAC 2-2 (PSD), and 326 IAC 6-3-2 (Manufacturing Processes).

## **Conclusion**

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Minor Source Modification No. 033-17732-00076.

**Appendix A: Emission Calculations  
PM and PM10 Emissions  
From Units #79 through #85**

**Company Name: Iron Dynamics, Inc.  
Address: 4500 County Road 59, Butler, IN 46721  
MSM: 033-17732-00076  
Reviewer: ERG/YC  
Date: August 15, 2003**

Type of Control:                      Filters

Unit ID	Process Description	Grain Loading (gr/sdcf)	Maximum Flow Rate (scfm)	Control Efficiency (%)	PTE of PM/PM10 after Control (lbs/hr)	PTE of PM/PM10 after Control (tons/yr)	PTE of PM/PM10 before Control (lbs/hr)	PTE of PM/PM10 before Control (tons/yr)
S79	SAF Dust Recycling	0.01	1,800	99.0%	0.15	0.68	15.4	67.6
S80	Zinc Silo	0.01	900	99.0%	0.08	0.34	7.71	33.8
S81	Ash Silo	0.01	900	99.0%	0.08	0.34	7.71	33.8
S82	EAF Dust Unloading	0.01	2,400	99.0%	0.21	0.90	20.6	90.1
S83	Vacuum System	0.01	240	99.0%	0.02	0.09	2.06	9.01
S84	Zinc Silo Unloading	0.01	250	99.0%	0.02	0.09	2.14	9.39
S85	Ash Silo Unloading	0.01	250	99.0%	0.02	0.09	2.14	9.39
<b>Total</b>						<b>2.53</b>		<b>253</b>

Assume all PM emissions are equal to PM10 emissions.

**Methodology**

PTE of PM/PM10 after Control (lbs/hr) = Grain Loading (gr/dscf) x Max. Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/gr

PTE of PM/PM10 after Control (tons/yr) = Grain Loading (gr/dscf) x Max. Flow Rate (scfm) x 60 mins/hr x 1/7000 lb/gr x 8760 hr/yr x 1 ton/2000 lbs

PTE of PM/PM10 before Control (lbs/hr) = PTE of PM/PM10 after Control (lbs/hr) / (1-Control Efficiency)

PTE of PM/PM10 before Control (tons/yr) = PTE of PM/PM10 after Control (tons/yr) / (1-Control Efficiency)